Information Assurance and Intelligent IP Routing: Beyond the Best Effort IP Network for Mission Critical Applications

As the federal networks increase the use and reliance on the public and private IP networks for mission critical applications, so increases the need to move to multi-homed networks and beyond the best effort service levels offered by traditional network service providers. With this reliance and the increasing convergence and migration of new applications such as voice, video and data onto these IP networks, it has become imperative to be able provide a high performance IP infrastructure which in highly redundant, diverse, reliable, flexible and manageable. In support of this requirement many organizations have developed and implemented multi-carrier or multi-homed network strategies. With these strategies come the complexities of management of applications and traffic across these varied networks. The management of data across the public Internet in particular is difficult at best when left to the typical conventions of protocols such as BGP.

In order to achieve a robust, high quality network, one must address the unpredictable performance problems, availability, and delays associated with these networks as well as contain the costs and the management burden operating these networks invariably entails.

This presentation will examine the unpredictable performance and exposure of utilizing individual service providers and the operational complexity of delivering demanding high quality applications over a multi-homed infrastructure. It will then examine how some newly emerging technologies such as “intelligent” IP routing can help address these problems, at long last enabling the deployment of mission critical real-time applications over private IP networks as well as the unpredictable public Internet.

Author Biographies

Eric Klinker is the Vice President of Engineering for Internap Network Services, the market leader in intelligent IP route-control solutions. Previously, Mr. Klinker was the Chief Technology Officer and Chief Architect for netVmg, a pioneering and leading provider of intelligent IP route-control and bandwidth management products. Prior to netVmg, Mr. Klinker was a Network Architect for Excite@Home where he focused on product development of cable and IP network management systems. Mr. Klinker also spent seven years in applied research for the Naval Research Laboratory in Washington, DC. His primary research interests focused on Information Security, IP Multicast Routing and Distributed Computing. Klinker holds a bachelor's degree in Electrical Engineering from the University of Illinois, Urbana-Champaign, and a master's degree in Electrical Engineering from the Naval Postgraduate School in Monterey, California.

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